

R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

SUPPORT FOR THE CLAIM AMENDMENTS

Support for the claim amendments may be found in the specification, for example, on page 14 line 11-page 15 line 10 and in FIGS. 2 and 3, as originally filed. Thus, no new matter has been added. Since the amendments should only require a cursory review, entry of the amendments is respectfully requested under MPEP §714.13 II. If the amendments are not entered, Applicant respectfully requests a concise explanation per MPEP §714.13 III for purposes of appeal.

OBJECTION TO THE CLAIMS

The objection to claim 18 for informalities has been obviated by appropriate amendment and should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

The rejection of claims 1-8 and 10-16 under 35 U.S.C. §102(e) as being anticipated by Ogawa et al. '966 (hereafter Ogawa) has been obviated in part by appropriate amendment, is respectfully traversed in part, and should be withdrawn.

Ogawa concerns a data receiving device which enables simultaneous execution of processes of a plurality of protocol hierarchies and generates header end signals (Title).

The Federal Circuit has stated that "[t]o anticipate, **every element and limitation** of the claimed invention must be found in a single prior art reference, **arranged as in the claim.**"¹ (Emphasis added). The Federal circuit has added that the anticipation determination is viewed from one of ordinary skill in the art: "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention."² Furthermore, "A claim is anticipated **only** if each and every element as set forth in the claim is found, either **expressly or inherently described**, in a single prior art reference."

Claim 1 provides a step for reading a pointer for a first parameter within an incoming packet (from a first network). The Office Action asserts that column 13, lines 50-55 of Ogawa disclose a pointer similar to the claimed pointer:

¹ *Brown v. 3M*, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) citing *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001); *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991) (Emphasis added by Appellant).

² *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991).

Incidentally, the TCP protocol information TC4 indicates an acknowledge number; the TCP protocol information TC5, an offset/flag; the TCP protocol information TC6, a window; **the TCP protocol information TC8, an object pointer;** and the TCP protocol information TC9, an optional field. (Emphasis added)

The TCP protocol object pointer appears to be the pointer cited in the Office Action. The Office Action asserts that column 13, lines 15-21 of Ogawa discuss a parameter similar to the claimed first parameter within an incoming packet from a first network:

Thereafter, the MAC header data MAH is received in accordance with WR1 to WR7. **The MAC header data MAH is constituted by** MAC address data MAA and protocol type data ET. In particular, a type of the following IP protocol can be identified by the protocol type data ET. In addition, MAC capsule data LL1 of DO is determined by the MAC address data MAA and the protocol type data ET. The MAC capsule data LL1 is output in synchronism with SB1 to SB4. (Emphasis added)

While the Office Action does not specifically identify which element in the above text is allegedly similar to the claimed first parameter, the text appears to indicate that all of the above elements are part of a MAC header data. Ogawa further states that the MAC layer is part of the second (data link) layer of the OSI model (see Ogawa column 2, lines 5-8). In contrast, the object pointer in the TCP protocol is part of the fourth (transport) layer of the OSI model (See Appendix A, pages A-4 and A-5). One of ordinary skill in the art would not appear to understand a pointer in a transport layer to be for a parameter in a data link layer. Therefore, the TCP object pointer of Ogawa appears to have no connection to the MAC header data of Ogawa as asserted in the Office Action. Thus, Ogawa does not appear to disclose or suggest

a step for reading a pointer for a first parameter within an incoming packet as presently claimed. As such, the Examiner is respectfully requested to either (i) identify the element within the MAC header data allegedly similar to the claimed first parameter and provide evidence that one of ordinary skill in the art would understand the TCP object pointer to be for that MAC header data element or (ii) withdraw the rejection.

Claim 16 provides language similar to claim 1 and adds the structure of a means for reading the pointer. In contrast, none of the above cited text of Ogawa appears to expressly or inherently mention a means for reading the TCP object pointer. Therefore, *prima facie* anticipation has not been established for lack of evidence that the reference discloses all of the claim elements as arranged in the claims. As such, the Examiner is respectfully requested again to either (i) identify the structure in Ogawa asserted responsible for reading the pointer or (ii) withdraw the rejection.

Claim 1 further provides a step for processing the first parameter in accordance with the pointer to produce a second parameter. The Office Action asserts that Ogawa discusses processing the unidentified MAC header data element (asserted similar to the claimed first parameter) in accordance with the TCP object pointer (asserted similar to the claimed pointer) in column 13, lines 15-21, reproduced above. However, nothing in Ogawa

column 13, lines 15-21 appears to talk about processing any of the elements in the MAC header data in accordance with the TCP object pointer. As such, the Examiner is respectfully requested to either (i) clearly identify the alleged processing function on the unidentified MAC header data in accordance with the TCP object pointer or (ii) withdraw the rejection.

Claim 1 further provides that the processing of the first parameter in accordance with the pointer produces a second parameter. The Office Action asserts that Ogawa discusses a parameter similar to the claimed second parameter in column 9, lines 7-24:

Further, by outputting the destination network address as the retrieval key data signal SKD2, an entry having the same value as the output retrieval key data signal SKD2 in the network address field can be found in each entry of the retrieval table, and it is possible to obtain a PID with which a host computer that is to receive the data frame and a MAC address of that computer by reading that entry. In addition, if a CAM having the retrieval table configuration of which is shown in FIG. 6 is used as the external circuit, judgment is made upon whether the data frame is to be relayed to enable the firewall to be constructed by outputting the transport layer protocol code, the transport layer port number, the source network address and the destination network address as the retrieval key data signal SKD2 and retrieving whether entries having the same data exist in the table. In this judgment, relay may be enabled if entries having the same data exist in the table, or it may be enabled if entries having the same data do not exist in the table.

While the Office Action fails to identify which of the above elements is allegedly similar to the claimed second parameter, none of the above elements of Ogawa appear to be the product of an unidentified processing of an unidentified MAC header data element

(asserted similar to the claimed first parameter) in accordance with the TCP object pointer (asserted similar to the claimed pointer). Therefore, Ogawa does not appear to disclose or suggest a step for processing a first parameter in accordance with a pointer to produce a second parameter as presently claimed. As such, the Examiner is respectfully requested to either (i) clearly identify the element in column 9, lines 7-24 of Ogawa allegedly similar to the claimed second parameter and show where Ogawa mentions that the unidentified element is produced from the unidentified MAC header data element or (ii) withdraw the rejection.

Claim 16 further provides language similar to claim 1 and adds the structure of a means for processing the first parameter. In contrast, the cited text of Ogawa does not appear to mention any structure for processing the unidentified MAC header data (asserted similar to the claimed first parameter) in accordance with the TCP object pointer (asserted similar to the claimed pointer). Therefore, *prima facie* anticipation has not been established for lack of evidence that the reference expressly or inherently discloses each and every element as arranged in the claims. As such, the Examiner is respectfully requested again to either (i) identify the structure of Ogawa allegedly similar to the claimed means for processing or (ii) withdraw the rejection.

Claim 1 further provides a step for presenting an outgoing packet containing the second parameter for a second network. The Office Action asserts that Ogawa column 8, lines 50-63 mentions presenting an outgoing packet on a second network containing the unidentified element (allegedly similar to the claimed second parameter):

...a retrieval sequencer 25B which is started up by a control signal SEC from the sequencer 32, executes the retrieval operation with respect to the external CAM circuit by outputting the retrieval data selection signal and the SCK2, changes a sequence for retrieval using the HIT signal output from the CAM and directs a later-described retrieval result register 25C to store/hold a retrieval result reading signal by outputting a retrieval result holding signal; and a retrieval result register 25C which stores/holds the retrieval result reading signal in response to the direction from the retrieval sequencer 25B and can be read by the external CPU as a part of the capture register circuit 24.

The retrieval key data signal SDK2 and the retrieval data synchronizing signal SCK2 are used to output a destination address of the received frame data to the external circuit 40 for executing various processes outside.

The only element in the above text common to the text of Ogawa in column 9, lines 7-24 appears to be the retrieval key data signal SDK2. However, noting in the above text, or in any other section of Ogawa appears to mention the retrieval key data signal SDK2 being part of an outgoing packet on an unidentified second network. Therefore, Ogawa does not appear to disclose or suggest a step for presenting an outgoing packet containing a second parameter for a second network as presently claimed. As such, the Examiner is respectfully requested to either (i) clearly identify the element in Ogawa column 8, lines 50-63 allegedly similar to the claimed

second parameter, clearly identify the text of Ogawa allegedly showing the unidentified element (claimed second parameter) in an outgoing packet and clearly identify a network of Ogawa allegedly similar to the claimed second network on which the unidentified outgoing packet is presented or (ii) withdraw the rejection.

Claim 16 further provides language similar to claim 1 and adds the structure of a means for presenting the outgoing packet. In contrast, the cited text of Ogawa does not appear to mention any structure for presenting an outgoing packet. Therefore, *prima facie* anticipation has not been established for lack of evidence that the reference expressly or inherently discloses each and every element as arranged in the claims. As such, the Examiner is respectfully requested to either (i) identify the structure of Ogawa allegedly similar to the claimed means for presenting or (ii) withdraw the rejection.

Claim 2 provides a step for reading a length and an offset for the first parameter from a database storing the pointer. The Office Action asserts that Ogawa discusses reading a length and an offset for the unidentified MAC header data element (asserted similar to the claimed first parameter) in column 9, lines 27-65:

FIG. 7 shows an example of a series of retrieval operations carried out by the second cut-through circuit 25 in a bridge, and FIGS. 8 through 10 show the operation of each signal. FIGS. 8 to 10 divide the continuously-lapsed operation into three for the convenience's sake.

Also, FIG. 11 shows an example of a series of retrieval operations executed by the second cut-through circuit 25 in a router.

The protocol recognition circuit 26 identifies a protocol type of each protocol hierarchy by comparing a protocol type represented by a protocol type signal PT input from the capture register circuit 24 or a protocol type indicated by the frame data FD2 output from the input data control circuit 22 with a predetermined protocol code for checking coincidence.

Here, the frame data FD2 directly input from the input data control circuit 22 to the protocol recognition circuit 26 is only of a network layer protocol type included in the MAC layer header. A code signal indicating a type of any higher protocol hierarchy, which was temporarily stored in the capture register 24A, is input to the protocol recognition circuit 26. That is because the code representing the network layer protocol corresponds to the end of the MAC header and, if it is stored in the capture register 24A, it will not be ready for the network layer header processing.

Note that a result of recognition of a protocol type by the protocol recognition circuit 26 is output to the sequence selection circuit 28 or the header end timing detection circuit 36 as a protocol identification code signal PTN and also output to the external circuit such as a computer through the CPU bus as a protocol identification code signal PTN2.

The sequence selection circuit 28 generates a sequence selection signal SES for selecting a process for each protocol hierarchy of the received frame data based on a result of recognition of a protocol type output from the protocol recognition circuit 26 and changes the sequence selection signal SES corresponding with each protocol hierarchy in accordance with a header end signal PHE output from the header end timing detection circuit 36.

Nowhere in the above text, or in any other section does Ogawa appear to discuss a length and an offset for a MAC header data element. Therefore, Ogawa does not appear to disclose or suggest a step for reading a length and an offset for the first parameter from a database storing the pointer as presently claimed.

Claim 2 further provides a step for partitioning the incoming packet in accordance with the offset and the length to extract the first parameter. The Office Action again asserts that

the claimed partitioning step is discussed in the above reproduced text. However, nowhere in the above text, or in any other section does Ogawa appear to discuss partitioning an incoming packet in accordance with an unidentified offset and an unidentified length to extract an unidentified MAC header data element (asserted similar to the claimed first parameter). Therefore, Ogawa does not appear to disclose or suggest a step for partitioning an incoming packet in accordance with an offset and a length to extract a first parameter as presently claimed. As such, claim 2 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 17 provides that a structure for partitioning the incoming packet is part of the means for processing (the first parameter). In contrast, none of the text of Ogawa cited in the Office Action appears to mention a structure for partitioning as part of a structure for processing. Therefore, *prima facie* anticipation has not been established for lack of evidence that the reference expressly or inherently discloses or suggests each and every element as arranged in the claims. As such, the Examiner is respectfully requested to either (i) identify the structure of Ogawa that allegedly performs the processing and the structure that allegedly performs the partitioning or (ii) withdraw the rejection.

Claim 3 provides a step for downloading all of the offset, the length, and the pointer into the database prior to

reading. The Office Action asserts that a step similar to the claimed downloading is discussed by Ogawa in column 9, lines 27-65, as reproduced above. In contrast, none of the above text, or any other section of Ogawa appears to discuss a step for downloading an offset, a length and a pointer. In particular, Ogawa does not even appear to use the word "download".

Assuming, *arguendo*, that Ogawa does somehow discuss downloading (for which Applicant's representative does not necessarily agree), Ogawa still appears to be silent that the downloading takes place before the alleged reading of the of the TCP object pointer (asserted similar to the claimed pointer). Therefore, Ogawa does not appear to disclose or suggest a step for downloading all of the offset, the length, and the pointer into the database prior to reading as presently claimed. As such, claim 3 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 4 provides a step for routing the first parameter to at least one of a plurality of peripheral blocks identified by the pointer prior to processing, wherein the peripheral blocks perform the processing. The Office Action asserts that the claimed routing to a peripheral block identified by the pointer is discussed by Ogawa in column 3, lines 44-65:

In a data receiving device for receiving from a network frame data based on any arbitrary protocol of a plurality of protocol hierarchies defined from a physical layer to upper layers, the present invention solves the above-described

drawbacks by comprising: an input data control circuit for receiving the frame data together with its synchronizing signals from the network and holding them in a register; a capture register circuit for storing/holding in accordance with information such as a protocol type code, a header length, a frame length (network layer only), source/destination addresses or source/destination port or socket numbers included in a header for each protocol hierarchy constituting the frame data; a protocol recognition circuit for identifying a protocol type of each protocol hierarchy from the protocol type code stored in the capture register circuit; a sequence selection circuit which generates a sequence selection signal for selecting a processing for each protocol hierarchy of the recessed frame data in accordance with a result of identification by the protocol recognition circuit and changing the sequence selection signal in accordance with a header end signal; a sequence counter for counting a pulse signal in the frame data synchronizing signal;

Nowhere in the above text, or in any other section does Ogawa appear to discuss routing an unidentified MAC header data element (asserted similar to the claimed first parameter) to an unidentified peripheral block identified by the TCP object pointer (asserted similar to the claimed pointer).

Furthermore, the Office Action asserts that the processing of the first parameter in the peripheral block is discussed in Ogawa in column 4, lines 44-60:

In addition, if the input data control circuit includes a first cut-through circuit for outputting the frame data synchronizing signal outside according a direction of a first cut-through signal output from the sequencer and for outputting outside a content of a specific register in the input data control circuit according to the first cut-through signal in synchronism with the frame data synchronizing signal, source/destination addresses and others included in the header of each protocol hierarchy of the received data frame can be selectively fetched and output to external circuits. Therefore, information required in a destination of linking to which the received data frame is transmitted or

for the repeating process can be fetched at high speed by using a retrieval table formed by a CAM (Contents Addressable Memory), a RAM (Random Access Memory) and others in an external circuit and executing table retrieval using the output as key data for retrieval.

Nowhere in the above text, or in any other section does Ogawa appear to discuss a peripheral block processing an unidentified MAC header data element (asserted similar to the claimed first parameter). Therefore, Ogawa does not appear to disclose or suggest a step for routing the first parameter to at least one of a plurality of peripheral blocks identified by the pointer, wherein the peripheral blocks perform the processing as presently claimed. Claim 6 provides language similar to claim 4. As such, claims 4 and 6 are fully patentable over the cited reference and the rejection should be withdrawn.

Claim 5 provides a step for reading a second offset and a second length for a second network protocol from a database prior to assembling an outgoing packet. In contrast, Ogawa appears to be silent regarding reading offsets and lengths from a database. Therefore, Ogawa does not appear to disclose or suggest a step for reading a second offset and a second length for a second network protocol from a database prior to assembling an outgoing packet as presently claimed. As such, claim 5 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 7 provides that the step for processing the first parameter (step B) is at least two processes of a content

addressable memory process, a time to live process, a comparison process, a counter process, a value swapping process, a stuffing process, a de-stuffing process, a cyclic redundancy checksum process, a parity process, a first-in-first-out process, a length construction generator process, a header error control synchronization process, a frame relay lookup process, a data link connection identifier process, a protocol identification analysis process, a point-to-point protocol verification process, a parameter discard process, and a buffer process. The Office Action asserts that at least two of the claimed processes are discussed by Ogawa in column 3, line 60 thru column 4, line 11:

...a sequence selection signal for **selecting a processing** for each protocol hierarchy of the recessed frame data in accordance with a result of **identification** by the protocol recognition circuit and changing the sequence selection signal in accordance with a header end signal; a sequence counter for **counting a pulse signal** in the frame data synchronizing signal; a sequencer which operates in response to a value of the sequence counter and the sequence selection signal and has a function for **directing the capture register circuit** a timing for storing/holding information included in the header for each protocol hierarchy and for **outputting a second header end timing** used to direct an end timing for the header when a protocol that is specified by the sequence selection signal and being processed has a header with a fixed length; and a header end timing detection circuit for **selecting either a first header end timing** obtained by comparing a value of the sequence counter with the header length of the protocol hierarchy which is being received and **[or] the second header end timing** output by the sequencer to generate the header end signal. (Emphasis added)

However, none of the processes in the above text appear to operate on an unidentified MAC header data element (asserted similar to the

claimed first parameter). Therefore, Ogawa does not appear to disclose or suggest that a step for processing a first parameter is at least two processes of a content addressable memory process, a time to live process, a comparison process, a counter process, a value swapping process, a stuffing process, a de-stuffing process, a cyclic redundancy checksum process, a parity process, a first-in-first-out process, a length construction generator process, a header error control synchronization process, a frame relay lookup process, a data link connection identifier process, a protocol identification analysis process, a point-to-point protocol verification process, a parameter discard process, and a buffer process as presently claimed. As such, claim 7 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 11 provides a step for selecting among a plurality of frame delineation methods for a plurality of network protocols. The Office Action asserts that the claimed selecting step is discussed in Ogawa in column 7, line 54-column 8, line 12:

As shown in FIG. 3, the capture register circuit 24 is constituted by a plurality of capture **registers** 24A for a source MAC address, a destination MAC address, a network layer protocol, a source IP address, a destination IP address, a transport layer protocol, a source port number, a destination port number, receive port number (PID) and others. Although the present invention is not restricted to this structure in application, this embodiment has a source MAC **register** for storing/holding a source MAC address, a destination MAC **register** for storing/holding a destination MAC address and a network layer protocol **register** for storing/holding a network layer protocol as **registers** for storing/holding information included in the MAC layer header; a frame length **register** (network layer only) for

storing/holding a frame length, a transport layer protocol **register** for storing/holding a protocol code of a transport layer, a source network address **register** for storing/holding a source network address, a destination network address **register** for storing/holding a destination network address, and a header length **register** for storing/holding a length of the network layer header as **registers** for storing/holding information included in the network layer header; and a source port **register** for storing/holding a source port number and a destination port **register** for storing/holding a destination port number as **registers** for storing/holding information included in the transport layer header. (Emphasis added)

The above text appears to be no more than a list of registers. Nothing in the above text discusses a step of selecting among a plurality of frame delineation methods for a plurality of network protocols. Therefore, *prima facie* anticipation has not been established for lack of evidence that Ogawa expressly or inherently discloses each and every element as arranged in the claims. As such, the Examiner is respectfully requested to either (i) clearly identify where Ogawa allegedly mentions a step of selecting among multiple frame delineation methods or (ii) withdraw the rejection.

Claim 13 provides a step for framing the outgoing packet to produce a transmit frame for the second network. The Office Action asserts that the claimed framing step is discussed by Ogawa in column 3, lines 44-65, as reproduced above in the arguments for claim 4. In contrast, nowhere in the cited text of Ogawa does Ogawa appear to expressly or inherently mention **framing an outgoing packet**. In particular, the cited text of Ogawa only appears to discuss how to **receive an incoming packet**. Therefore, Ogawa does

not appear to disclose or suggest a step for framing the outgoing packet to produce a transmit frame for the second network as presently claimed. As such, claim 13 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 14 provides a step for selecting among a plurality of framing methods for a plurality of network protocols prior to framing. The Office Action asserts that the claimed selecting step is disclosed by Ogawa in column 10, lines 21-36:

The sequencer 32 is provided with a plurality of processing sequences corresponding with various types of protocols of a plurality of protocol hierarchies, and selects one from a plurality of the processing sequences in accordance with a sequence selection signal SES output from the sequence selection circuit 28 and executes the selected sequence according to a sequence counter signal CT output from the sequence counter 30. The sequencer 32 directs a timing at which information of a protocol type code, a header length, source/destination addresses, source/destination port numbers and others included in the header of each protocol hierarchy is stored/held to the capture register circuit 24 by executing the selected sequence to output a sequence control signal SEC, and outputs a second header end timing indicating the end timing for the header if the currently-executed protocol possesses the header having a fixed length. Further, the sequencer 32 directs the input data control circuit 22 to output a value stored in a predetermined register within the circuit 22 as a retrieval key data signal SKD to the external circuit 40 together with the synchronizing signal SCK relative to the retrieval key data signal SKD by outputting the sequence control signal SEC. (Emphasis added)

The Office Action appears to be arguing that the sequencer 32 of Ogawa performs a step similar to the claimed selection step for a **framing** method. However, Ogawa states in column 6, lines 55-59 that the sequencer 32 is part of a first embodiment shown in FIG. 1. Ogawa further states that FIG. 1 "is a block diagram showing

the structure of a first embodiment of **a data receiving device**". (Emphasis added). One of ordinary skill in the art would appear to understand that receiving devices deframe incoming information, not select among multiple framing methods for transmitted information. Therefore, Ogawa does not appear to disclose or suggest a step for selecting among a plurality of framing methods for a plurality of network protocols prior to framing as presently claimed. As such, claim 14 is fully patentable over the cited reference and the rejection should be withdrawn.

Claims 8, 10, 12 and 15 depended either directly or indirectly from independent claim 1, which is now believed to be allowable. As such, the presently pending invention is fully patentable over the cited reference and the rejection should be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claim 9 under 35 U.S.C. §103(a) as being unpatentable over Ogawa in view of "Official Notice" is respectfully traversed and should be withdrawn.

The rejection of claims 18-20 under 35 U.S.C. §103(a) as being unpatentable over Ogawa in view of Wilford et al. '247 (hereafter Wilford) have been obviated in part, is respectfully traversed in part, and should be withdrawn.

Ogawa concerns a data receiving device which enables simultaneous execution of processes of a plurality of protocol hierarchies and generates header end signals (Title). Wilford concerns an architecture for high speed class of service enabled linecard (Title).

"[T]o establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of **making the specific combination that was made by the applicants.**"³ "[T]he factual inquiry whether to combine references must be thorough and searching."⁴ "This factual question ... [cannot] be resolved on subjective belief and unknown authority."⁵ "It must be based on objective evidence of record."⁶ The Examiner must show that (a) there is **some suggestion or motivation**, either **in the references** or in the **knowledge generally available** to one of ordinary skill in the art, to modify or combine the references, (b) there is a reasonable expectation of success, and (c) the prior art reference

³ *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (citing *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)).

⁴ *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001).

⁵ *In re Lee*, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

⁶ *Id.* at 1343, 61 USPQ2d at 1434.

(or combination of references) teaches or suggests all of the claim limitations.⁷ "The motivation, suggestion or teaching may come explicitly from statement in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved."⁸ Furthermore, The Court of Appeals for the Federal Circuit has indicated that the requirement for showing the teaching of motivation to combine references is "rigorous" and must be "**clear and particular**".⁹ (Emphasis added)

Regarding claim 9, the Office Action has failed to establish clear and particular evidence of motivation to modify Ogawa to make processing of a first parameter non-programmable. The asserted motivations (i) "to facilitate non-programmable processing", (ii) "enhance processing the steps taught by the Ogawa" and (iii) "help increase the degree of freedom of circuit design" provided in the Office Action are not credited to any reference or knowledge generally available to one of ordinary skill as required by MPEP §2142. Furthermore, the asserted motivations do not appear to arise from the nature of some problem to be solved per *In re Huston*. Instead, the Office Action appears to be

⁷ Manual of Patent Examining Procedure (M.P.E.P.), Eighth Edition, Revised May 2004, §2142.

⁸ *In re Huston* 308, F.3d 1267, 1278, 64 USPQ2d 1810, 1810 (Fed. Cir. 2002), citing *In re Katzab* 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000)

⁹ *In re Anita Dembiczak and Benson Zinbarg*, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999)

improperly combining the references simply to meet the limitations of the claim. Still furthermore, the fact that Yusa (U.S. Patent No. 5,633,806) teaches a concept does not explain why one of ordinary skill in the art would be motivated to modify Ogawa with that concept. The fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness per MPEP §2143.01. As such, *prima facie* obviousness has not been established for lack of clear and particular evidence of motivation to combine the references. Therefore, the Examiner is respectfully requested to either (i) identify the source of the asserted motivations and provide evidence if from knowledge generally available to one of ordinary skill or (ii) withdraw the rejection.

Regarding claims 18-20, the Office Action has failed to provide clear and particular evidence of motivation to combine the references. In particular, the asserted motivations provided in the Office Action to (i) "enhance the handling of information associated with the pointer", (ii) "help the software to process information for the circuit", (iii) enhance supporting information that is within the processing means", (iv) "enhance supporting information that is outside the processing means" and (v) "enhance handling of the information over the network according to the network protocol used" are not credited to any reference or knowledge generally available to one of ordinary skill as required by MPEP §2142. Furthermore, the asserted motivations do not appear

to arise from the nature of some problem to be solved per *In re Huston*. Therefore, *prima facie* obviousness has not been established for lack of clear and particular evidence of motivation to combine the references. As such, the Examiner is respectfully requested to either (i) identify the source of the alleged motivations and provide evidence if from knowledge generally available to one of ordinary skill or (ii) withdraw the rejection.

Claim 18 provides that the means for processing (from claim 16) comprises a plurality of peripheral means, at least one of the peripheral means (i) linked to the pointer and (ii) configured to perform a process involving the first parameter. The Office Action asserts that modules of memory in figures 9, 10, 15 and 26 of Wilford are similar to the claimed peripheral means. The Office Action further asserts that "information including header" of Wilford is similar to the claimed first parameter. The Office Action also asserts that the modules of memory from Wilford can perform a process involving a first parameter in column 6, lines 2-23:

The packet is then enqueued normally in an output queue in the second linecard 110. Packets from the CPU that are to be sent via the same linecard are written back to the outbound queue manager 280 from CPU 440.

Regular packets (i.e., those other than the one sent to the CPU) are sent to (inbound) fabric interface 170. Once the packets have been sent over switch fabric 120 and (outbound) fabric interface 170, they arrive at outbound receiver 260 in the outbound linecard. The outbound linecard may be in the same or a different linecard 110 than that discussed above. The conventional MAC rewrite is done by outbound receiver 260. Output rate pacing is performed in rate limiter 270

using, in one embodiment, algorithms similar to that used in the inbound path discussed above; in some embodiments, rate limiter 270 is omitted and no rate pacing is performed. Outbound packets are then buffered and enqueued by outbound queue manager 280 using outbound packet buffer 285. Outbound queue manager 280 and outbound packet buffer 285 are configured and operate similarly to inbound queue manager 240 and its associated inbound packet buffer 245.

Nowhere in the above text, or in any other section does Wilford appear to discuss modules of memory processing "information including header" as alleged in the Office Action. Nowhere in the above text does Wilford even appear to mention processing header information. Therefore, Ogawa and Wilford, alone or in combination, do not appear to teach or suggest that a means for processing comprises a plurality of peripheral means, at least one of the peripheral means (i) linked to the pointer and (ii) configured to perform a process involving the first parameter as presently claimed. As such, the Examiner is respectfully requested to either (i) clearly show where Wilford allegedly teaches modules of memory performing processing and provide evidence why one of ordinary skill in the art would be motivated to specifically combine the modules of memory from Wilford with the unidentified means for processing allegedly in Ogawa or (ii) withdraw the rejection.

Claim 19 provides that the peripheral means comprises a first plurality of the peripheral means internal to the means for processing and a second plurality of the peripheral means external to the means for processing, wherein each of the peripheral means

is configured to perform a different operation on the incoming packet. In contrast, Wilford appears to be silent regarding each of the modules of memory (asserted similar to the claimed peripheral means) configured to perform a different operation on an incoming packet. Therefore, Ogawa and Wilford, alone or in combination, do not appear to teach or suggest a plurality of peripheral means comprising a first plurality of the peripheral means internal to a means for processing and a second plurality of the peripheral means external to the means for processing, wherein each of the peripheral means is configured to perform a different operation on the incoming packet as presently claimed. As such, claim 19 is fully patentable over the cited references and the rejection should be withdrawn.

Claim 20 depends from independent claim 16, which is now believed to be allowable. As such, the presently pending invention is fully patentable over the cited references and the rejection should be withdrawn.

COMPLETENESS OF THE OFFICE ACTION

Aside from a notice of allowance, Applicant's representative respectfully requests any further action on the merits be presented in a new action. MPEP §707.07(f) reads:

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and **answer the substance** of it.
(Emphasis added)

Applicant's representative traversed the rejection of claim 16 in the Office Action for lack of evidence that Ogawa expressly or inherently discloses the claimed structure. The Examiner was specifically requested to "provide a clear and concise explanation how the cited paragraphs of Ogawa allegedly anticipate the claimed structure." The current Office Action repeats the rejection of claim 16 and improperly repeats the **use of the steps** in method claim 1 **to reject the structure** of apparatus claim 16. The current Office Action fails to answer the substance of the traverse raised in the previous amendment regarding Ogawa's alleged anticipation of the structure of claim 16. As such, the current Office Action is incomplete and either a notice of allowance or a new Office Action on the merits should be issued.

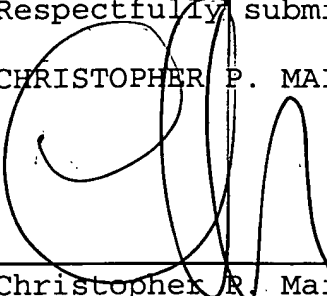
Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge our office
Account No. 50-0541.

Respectfully submitted,

CHRISTOPHER P. MAIORANA, P.C.



Christopher P. Maiorana
Registration No. 42,829
24840 Harper Avenue, Suite 100
St. Clair Shores, MI 48080
(586) 498-0670

Dated: June 6, 2005

Docket No.: 0325.00483

Encyclopedia of Networking, Electronic Edition

Tom Sheldon

Osborne McGraw-Hill

Berkeley New York St. Louis San Francisco
Auckland Bogotá Hamburg London Madrid
Mexico City Milan Montreal New Delhi Panama City
Paris São Paulo Singapore Sydney
Tokyo Toronto

Osborne/McGraw-Hill
2600 Tenth Street
Berkeley, California 94710
U.S.A.

For information on translations or book distributors outside the U.S.A., or to arrange bulk purchase discounts for sales promotions, premiums, or fund-raisers, please contact Osborne/McGraw-Hill at the above address.

Encyclopedia of Networking, Electronic Edition

Copyright © 1998 by The McGraw-Hill Companies. All rights reserved. Printed in the United States of America. Except as permitted under the Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher, with the exception that the program listings may be entered, stored, and executed in a computer system, but they may not be reproduced for publication.

1234567890 DOC DOC 901987654321098

ISBN 0-07-882333-1 PPBK

ISBN 0-07-882350-1 HRDBK

Publisher

Brandon A. Nordin

Proofreader

Karen Mead

Editor-in-Chief

Scott Rogers

Indexer

Dan Logan

Acquisitions Editor

Wendy Rinaldi

Computer Designer

Jani Beckwith

Project Editor

Emily Rader

Illustrators

Sue Albert

Editorial Assistant

Ann Sellers

Leslee Bassin

Arlette Crosland

Lance Ravella

Technical Editor

Terè Parnell

Cover Design

Regan Honda

Copy Editor

Dennis Weaver

Information has been obtained by Osborne/McGraw-Hill from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, Osborne/McGraw-Hill, or others, Osborne/McGraw-Hill does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions or the results obtained from use of such information.

To

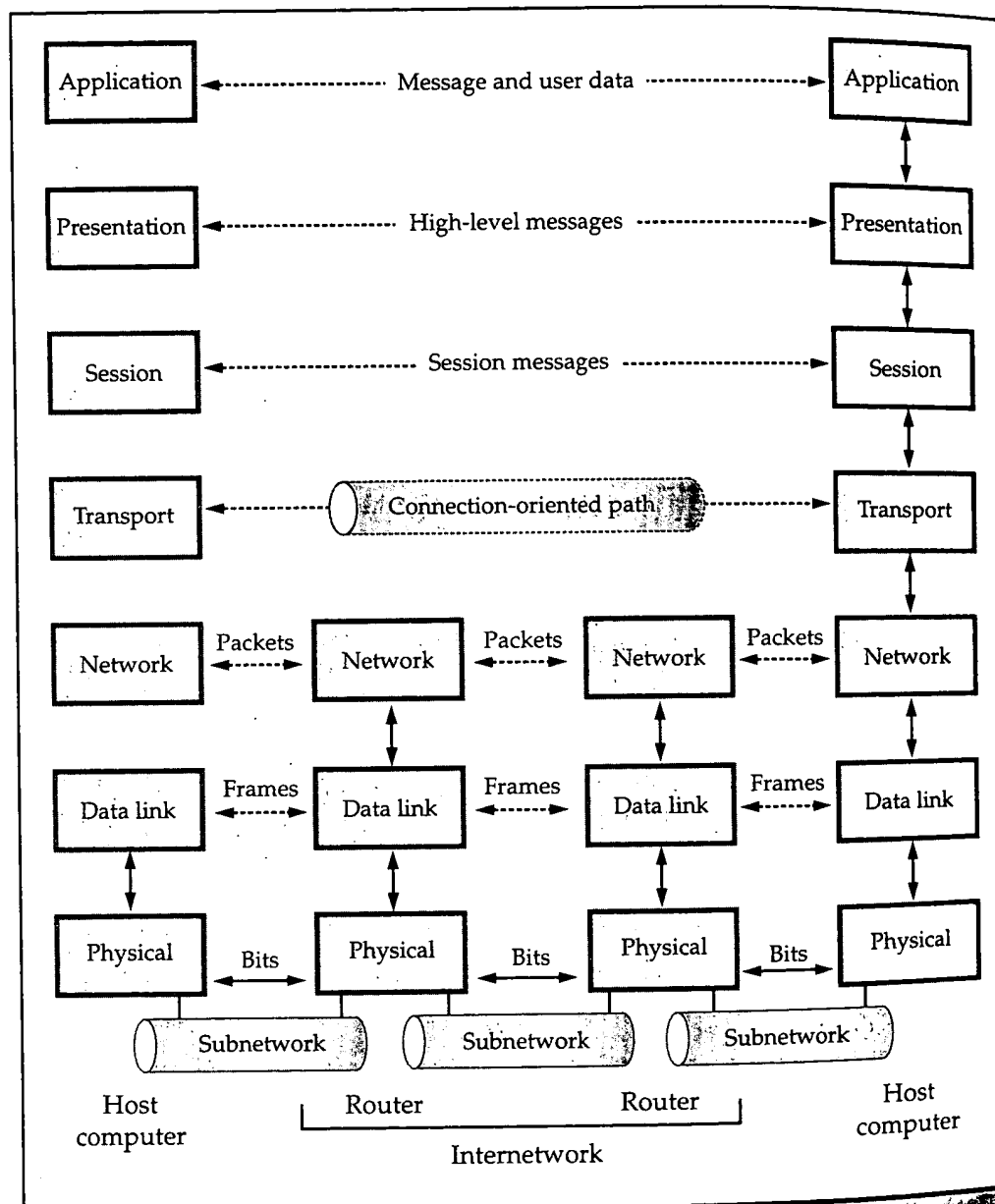


Figure 0-3. *The OSI reference model.*

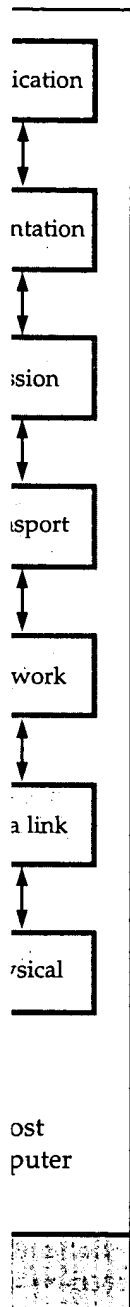
Each layer of the ISO has defined its own standards. The more popular in which they re

THE PHYSICAL interface, such as voltage levels required for maintaining, and for data communication. RS-449 allows local area networks such as Ethernet, token

THE DATA LINK receiving information for its purpose is to divide the frames of data into a frame at a time. The receipt of a frame is a point-to-point link. Multiple point-to-point links to reach the (medium access) and contend for

THE NETWORK between two devices on an internetwork serves as the path to its destination within the network. Interconnected routers on multiple data links that belong to the same LAN are seen as a single hop on another LAN. The network layer in the OSI model uses the network layer protocol. See "Network Layer Protocols."

THE TRANSPORI
moving informa
systems may be
Transport layer 1
send data in a st
and constitutes a
the flow. This flo
through specific



Each layer of the OSI model is described here for what it defines. Remember that the ISO has defined its own protocols, but these are not widely used in the industry. The more popular TCP/IP and IPX protocols are mentioned with respect to the layers in which they reside. Note that the bottom physical layer is discussed first for clarity.

THE PHYSICAL LAYER The physical layer defines the physical characteristics of the interface, such as mechanical components and connectors, electrical aspects such as voltage levels representing binary values, and functional aspects such as setting up, maintaining, and taking down the physical link. Well-known physical layer interfaces for data communication include EIA RS-232 and RS-449, the successor to RS-232. RS-449 allows longer cable distances. Well-known LAN (local area network) systems are Ethernet, token ring, and FDDI (Fiber Distributed Data Interface).

THE DATA LINK LAYER The data link layer defines the rules for sending and receiving information across a physical connection between two systems. Its main purpose is to divide the data given it by the upper network layer into frames and send the frames of data across the physical link. Data is framed so it can be transmitted one frame at a time. The data link layer in the receiving system can then acknowledge receipt of a frame before the sender sends another frame. Note that the data link is a point-to-point link between two entities. The next layer up, the network layer, handles multiple point-to-point links in the case where frames are transmitted across multiple links to reach their destination. In broadcast networks such as Ethernet, a MAC (medium access control) sublayer was added to allow multiple devices to share and contend for the use of the same medium. See "Data Link Protocols."

THE NETWORK LAYER While the data link layer is used to control communication between two devices that are directly connected together, the network layer provides internetwork services. These services will ensure that a packet of information reaches its destination when traveling across multiple point-to-point links, i.e., a set of interconnected networks joined by routers. The network layer basically manages multiple data link connections. On a shared LAN, packets addressed to devices on the same LAN are sent using data link protocols, but if a packet is addressed to a device on another LAN, network protocols are used. In the TCP/IP protocol suite, IP is the network layer internetworking protocol. In the IPX/SPX suite, IPX is the network layer protocol. See "Internetworking," "IP (Internet Protocol)," and "Network Layer Protocols."

THE TRANSPORT LAYER The transport layer provides a high level of control for moving information between the end systems in a communication session. The end systems may be on the same network or on different subnetworks of an internetwork. Transport layer protocols set up a connection between source and destination and send data in a stream of packets, meaning that each packet is numbered sequentially and constitutes a flow that can be monitored to ensure proper delivery and identity in the flow. This flow is often called a *virtual circuit*, and the circuit may be preestablished through specific router paths in an internetwork. The protocol also regulates the flow

of packets to accommodate slow receivers and ensures that the transmission is not completely halted if a disruption in the link occurs. (In other words, it will keep trying to send until a time-out occurs.) TCP and SPX are transport layer protocols. See "TCP (Transmission Control Protocol)" and "Transport Protocols and Services" for more information.

THE SESSION LAYER The session layer coordinates the exchange of information between systems by using conversational techniques, or dialogs. Dialogs can indicate where to restart the transmission of data if a connection is temporarily lost, or where to end one data set and start a new one. This layer is a remnant of mainframe/terminal communications.

THE PRESENTATION LAYER Protocols at this layer are for presenting data. Information is formatted for display or printing in this layer. Codes within the data, such as tabs or special graphics sequences, are interpreted. Data encryption and the translation of other character sets are also handled in this layer. Like the session layer, this layer is a remnant of mainframe / terminal communications.

THE APPLICATION LAYER Applications access the underlying network services using defined procedures in this layer. The application layer is used to define a range of applications that handle file transfers, terminal sessions, and message exchange (for example, electronic mail).

RELATED ENTRIES Connection-Oriented and Connectionless Services; Data Communication Concepts; Data Link Protocols; Internet Organizations and Committees; Protocol Concepts; *and* Standards Groups, Associations, and Organizations

INFORMATION ON THE INTERNET

ISO (International Organization for Standardization) <http://www.iso.ch>

ISO's list of OSI standards <http://www.iso.ch/cate/3510001.html>

Cisco Systems' OSI paper
<http://www.cisco.com/univercd/data/doc/cintrnet/ito/55165.htm>

OSPF (Open Shortest Path First) Protocol

OSPF is a link-state routing algorithm that was derived from work done with IS-IS (Intermediate System-to-Intermediate System), and OSI intradomain routing protocols. Link-state routing, as compared to distance-vector routing, requires more processing power but provides more control over the routing process and responds faster to changes. The Dijkstra algorithm is used to calculate routes. See "Routing Protocols and Algorithms" for more information.

PACE (Priorit

PACE is a technology that provides on-time multi-destination, nondeterministic delivery of data to deliver real-time, switched network services as a 3Com solution.

Real-time
the same time
delivery of stc
providing the
reduced, time-
switch ports a
segment may
station equal a

PACE's Int
Ethernet and I
turns transmit
interleaved tra
caused by traf

RELATED ENT

INFORMATIO

3Com's PACE

Packet

The term "packet" refers to a single unit of data transferred over a data communication network. Packets are created by commands, such as the `send` command in the `socket` module. Large transmissions are broken down into smaller packets of a fixed string. If a packet is lost or corrupted, the sender must retransmit, not the receiver. The receiver must then reassemble the data in the sending packet. The receiver must also check for errors in the another computer.

As mentioned, streams of bits are sent over the network layer and are appropriately mapped to the unit of data transfer.